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Federal Energy Management Program

# Information Alert

# ISWG NEWSLETTER
# MARCH 2007

This newsletter is the first in a series of bi-annual newsletters produced by the Interagency Sustainable Working Group (ISWG). The purpose of the *ISWG Newsletter* is to provide the ISWG with timely information on topics relevant to Federal sustainable design activities. The ISWG, chaired by the Department of Energy's Federal Energy Management Program (FEMP), was established in September 2001 in response to *Executive Order 13123 - Greening the Government Through Efficient Energy Management*. The purpose of the ISWG is to: serve as a forum for the exchange of information within the Federal government on individual agency sustainable design activities; foster and encourage each Executive branch department and agency to consider the adoption of sustainable design practices and the technologies in new Federally owned, operated, and leased buildings as well as major renovations of existing Federal facilities; and identify and propose solutions to barriers for the adoption of sustainable design in the Federal sector. The ISWG is composed of members representing 20 major agencies and a number of independent Federal agencies serving on the Interagency Energy Management Task Force.

Because this is the ISWG's first newsletter, it celebrates Federal sustainable design accomplishments over the past eight years in addition to a list of sustainable design events for 2007. This first issue covers an overview of ISWG accomplishments in 2006, a summary of awarded Federal LEED certified buildings from 2000 to 2007, a review of awarded Federal EnergyStar® buildings from 1999 to 2006, a snapshot of other key sustainable building rating systems, and lists of Federal and non-Federal sustainable resources. Succeeding newsletters will continue to provide historical context, but focus more on updates subsequent to the previous newsletter. Federal agency representatives are welcome to provide information on agency sustainable design events, certified facilities, and resources to include into the ISWG newsletter. If you are interested in submitting information to include into the next newsletter, please provide your input by September 1 to Seema Vyas at: svyas@energetics.com.

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# I. ISWG FY06 ACCOMPLISHMENTS

## Overview

In fiscal year (FY) 2006, the ISWG, successfully supported the implementation of sustainable design practices in Federal facilities by:

- Serving as a forum for the exchange of information within the Federal Government on individual Agency sustainable design activities;
- Supporting 19 agencies in sending high-level representatives to the "White House Summit on Federal Sustainable Buildings" that took place on January 24-25, 2006. The agencies signed the Memorandum of Understanding (MOU) on Federal Leadership in High-Performance and Sustainable Buildings. ISWG drafted and submitted the MOU to the Office of the Federal Environmental Executive (OFEE) at the beginning of FY 2006;
- Developing the Technical Guidance for Implementing the MOU on Federal Leadership in High-Performance and Sustainable Buildings; and
- Developing the Model Program Implementation Plan for the MOU on Federal Leadership in High-Performance and Sustainable Buildings.

The recent accomplishments of ISWG are highlighted in more detail below:

## Interagency Networking

Participation in the ISWG ranges from 40 to 50 "active" members (out of a total of approximately 300 members registered in the ISWG database), representing 20 Federal departments and agencies and selected members from the private sector, industry, and academia. The ISWG meets six times a year on a bi-monthly basis in Washington, DC. Subcommittee meetings occur as necessary. The bi-monthly ISWG meetings focus on roundtable announcements of agency-wide sustainable design projects and policies, presentations by Federal and private sector officials related to sustainable design, progress reports from subcommittees, and the planning of future ISWG activities. Meeting reports summarize meeting discussion. The ISWG Intranet web site (http://www.eere.energy.gov/femp/technologies/sustainable_workinggroup.cfm) allows Federal agencies to post sensitive agency-sponsored sustainable design information for member review and comment. Through this and other means, the ISWG initiates and participates in the review and evaluation of Federal reports and programs dealing with sustainable design. Also, the ISWG often conducts its meetings at Federal and non-Federal green buildings in the DC area. This allows for facility tours in conjunction with the meeting, giving Federal representatives valuable first-hand insight of innovative sustainable design practices. The interagency networking activities of the ISWG provide a vital role in expanding sustainable design tools and lessons learned amongst Federal facilities. Membership is free and any Federal member can join. Federal representatives recognize the value of the ISWG, which is exemplified by its membership increasing from 25 members in 2001 to approximately 300 members in 2007.

## MOU on Federal Leadership in High-Performance and Sustainable Buildings

In FY 2003, the ISWG initiated an effort to develop a formal commitment between agencies to implement sustainable building design practices in the form of an interagency MOU on Federal Leadership in High-Performance and Sustainable Buildings. The MOU was created to implement common strategies for planning, acquiring, siting, designing, building, operating, and maintaining high-performance and sustainable buildings. The MOU commits agencies to meet five sustainable Guiding Principles for integrated design, energy performance, water conservation, indoor environmental quality, and materials. In FY 2006, the ISWG collaborated with OFEE to promote the MOU. OFEE championed the MOU by conducting a White House Summit on Federal Sustainable Buildings at the White House Conference Center in Washington, D.C. The Summit, which took place on January 24-25, 2006, was a resounding success. A total of 19 Federal agencies signed the MOU that commits them to incorporate and adopt, as appropriate and practical, the five Guiding Principles into existing agency policy and guidance within 180 days of

signature. The signing of the MOU marks the first interagency effort supporting sustainable design practices in Federal facilities. As such, it represents a historic step in creating a sustainable Federal Government.

Technical Guidance for Implementing the MOU on Federal Leadership in High-Performance and Sustainable Buildings

To provide the necessary guidance for implementing Federal green buildings, the MOU states that the ISWG "will provide technical guidance and updates for the Guiding Principles." In January 2006, the ISWG responded by forming the "Technical Guidance Task Group (TG2)" to develop the Technical Guidance document. TG2 membership consisted of representatives from nine Federal agencies three national laboratories.

In June 2006, TG2 completed and posted the technical guidance document on the Whole Building Design Guide (http://www.wbdg.org/sustainablemou/). The technical guidance is a compilation of resources that offer practical advice for designing, operating, commissioning, and monitoring sustainable new buildings and major renovations in the Federal sector. The Technical Guidance document has been instrumental in assisting Federal representatives to fulfill the MOU guiding principles.

Model Program Implementation Plan for the MOU on Federal Leadership in High-Performance and Sustainable Buildings

The MOU states that "the Office of the Federal Environmental Executive will work with the ISWG and Federal Green Building Council to develop methods of reporting on progress towards this MOU in a manner that is least burdensome to the agencies." In response, the ISWG collaborated with OFEE from June 2006 to November 2006 to develop a Model Program Implementation Plan for the MOU. The model plan is a sample process or checklist that Federal agencies can use as a starting point in the development of their agency's High Performance and Sustainable Buildings Program. The plan has been successful in helping agencies meet the objectives of the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings. As agencies continue to implement the MOU in years to come, the ISWG and its vast network of green building expertise will be there to provide the guidance needed for success.

# II. UPCOMING SUSTAINABLE DESIGN EVENTS

## GENERAL ANNOUNCEMENTS

*Department of Energy's Federal Energy Management Program (FEMP)* conducts web-based training for the Federal sector. FEMP in conjunction with the Pacific Northwest National Laboratory will conduct a three-part series on metering from February to April of this year. For information on the dates, times, and course descriptions of the web-based three-part metering course and other web-based training courses offered by FEMP, visit the FEMP website at: www1.eere.energy.gov/femp/news/events.html.

*Association of Energy Engineers (AEE)* holds a variety of online energy and sustainable design courses. From March to June of this year, AEE will conduct courses on financing, energy management master plans, EPACT 2005, Leadership in Energy and Environmental Design (LEED®), energy auditing, sustainable energy plans, lighting retrofits, and skills updates for Certified Energy Managers. For a complete list of AEE online courses visit: www.aeecenter.org/realtime/.

*American Society for Testing and Materials (ASTM)* holds approximately 20 symposia and workshops annually on a wide variety of technical subjects, providing an opportunity for members and others to present their research findings and exchange information. On April 19-20, 2007, ASTM will sponsor an International Symposium on Common Ground, Consensus Building and Continual Improvement: Standards and Sustainable Building. For a complete list of ASTM symposia and workshops visit: http://www.astm.org/.

## CENTRAL REGION

| Date | Event | Sponsor | Web Site |
|---|---|---|---|
| May 3-5, 2007 | AIA Convention 2007: Growing Beyond Green<br>San Antonio, TX | American Institute of Architects | www.aiaconvention.com/aia_splash/2007/index.html |
| May 15-17, 2007 | EnvironDesign 2007<br>New Orleans, LA | *Interiors & Sources*® magazine | www.environdesign.com/new_orleans/default.asp |
| August 5-8, 2007 | Energy 2007 Workshop and Exhibition<br>New Orleans, LA | DOD, DOE, EPA, GSA, VA, and Homeland Security | www.govenergy.com/index.shtml |

## MID-ATLANTIC REGION

| Date | Event | Sponsor | Web Site |
|---|---|---|---|
| March 20, 2007 | Building for the 21st Century Lecture Series: Retailers Reap Savings by Cutting Energy<br>Washington, DC | National Renewable Energy Laboratory and the National Building Museum | http://www1.eere.energy.gov/femp/news/events_detail.html?event_id=2611 |
| March 20-22, 2007 | National Facilities Management & Technology Conference and Expo<br>Washington, DC | Many sponsors | http://www.nfmt.com/default.asp |
| April 4-5, 2007 | Globalcon 2007<br>Atlantic City, NJ | Association of Energy Engineers | http://globalconevent.com/ |
| April 15-18, 2007 | Engineering Sustainability 2007<br>Pittsburgh, PA | Mascaro Construction, University of Pittsburgh and others | www.engr.pitt.edu/msi/2007conference/confmain.htm |
| June 4-6, 2007 | Federal Environmental Symposium<br>Bethesda, MD | Office of the Federal Environmental Executive | www.fedcenter.gov/Announcements/index.cfm?id=6316 |
| June 7, 2007 | USGBC Annual Federal Summit<br>Washington, DC | US Green Building Council | (202) 82-USGBC or 828-7422 |

## MIDWEST REGION

| Date | Event | Sponsor | Web Site |
|---|---|---|---|
| March 25-27, 2007 | National Green Building Conference<br>St. Louis, MO | National Association of Home Builders, Whirlpool, McGraw Hill Construction, and many others. | www.nahb.org/meeting_details.aspx?meetingID=3249&sectionID=121 |
| April 29-May 1, 2007 | 5th Annual International Greening Rooftops for Sustainable Communities Conference Awards & Tradeshow<br>Minneapolis, MN | Green Roofs for Healthy Cities (GRHC) and the City of Minneapolis | http://greenroofs.org/minneapolis/ |
| May 2-4, 2007 | 15th National Conference on Building Commissioning<br>Chicago, IL | ComEd and Illinois Clean Energy | http://peci.org/ncbc/ncbc.htm |
| November 7-9, 2007 | 2007 Green Build International Conference and Expo<br>Chicago, IL | US Green Building Council | http://www.greenbuildexpo.org/DisplayPage.aspx?CMSPageID=8 |

## NORTHEAST REGION

| Date | Event | Sponsor | Web Site |
|---|---|---|---|
| March 7-10, 2007 | Traditional Building Exhibition and Conference<br>Boston, MA | Al Bar Wilmette Platers, AZEK Trimboards, Cold Jet, LLC, Foster Reeve & Associates, and others | www.traditionalbuildingshow.com/RandR/boston_event.shtml#hotel |
| March 13-15, 2007 | NESEA's Building Energy 07 Conference and Trade Show<br>Boston, MA | NESEA | www.buildingenergy.nesea.org/ |

SOUTHEAST REGION

| *Date* | *Event* | *Sponsor* | *Web Site* |
|---|---|---|---|
| March 12-14, 2007 | Low Impact Development Conference<br>Wilmington, NC | American Rivers, American Society of Civil Engineers, and Low Impact Development Center | www.ncsc.ncsu.edu/calendar/event_details.cfm?view=list&ID=368 |
| August 15-17, 2007 | World Energy Engineering Congress<br>August 15-17, 2007<br>Atlanta, GA | Association of Energy Engineers, EnergyStar®, and DOD. | www.energycongress.com/ |

WESTERN REGION

| *Date* | *Event* | *Sponsor* | *Web Site* |
|---|---|---|---|
| April 25-27, 2006 | Living Future 07<br>Seattle, WA | Cascadia Region Green Building Council (CRGBC) and the American Institute of Architects Seattle Committee on the Environment (COTE) | www.cascadiagbc.org/resources/LivingFuture07/living-future |
| June 6-7, 2007 | West Coast Energy Management Congress<br>Long Beach, CA | Association of Energy Engineers, Southern California Edison, EnergyStar®, and others | www.energyevent.com/ |

*Please visit, the Interagency Sustainable Working Group website's section on Sustainable Activities at: www1.eere.energy.gov/femp/sustainable/sustainable_workinggroup.html for a detailed list of the events listed above and other upcoming events of interest.*

# III. FEDERAL LEED® CERTIFIED BUILDINGS

The Leadership in Energy and Environmental Design (LEED®), building rating system created by the U.S. Green Building Council (USGBC) establishes a common standard of measurements for the design, construction, and operation of sustainable/ green buildings. LEED® certification building types and projects include: new commercial construction and major renovation (LEED®-NC), existing buildings operations and maintenance (LEED®-EB), commercial interiors (LEED®-CI), and core and shell development (LEED®-CS). The LEED® certification system is based on a point system. The amount of points achieved determines the level of certification ranging from basic LEED® certification, LEED® certified silver, LEED® certified gold, and LEED® certified platinum.

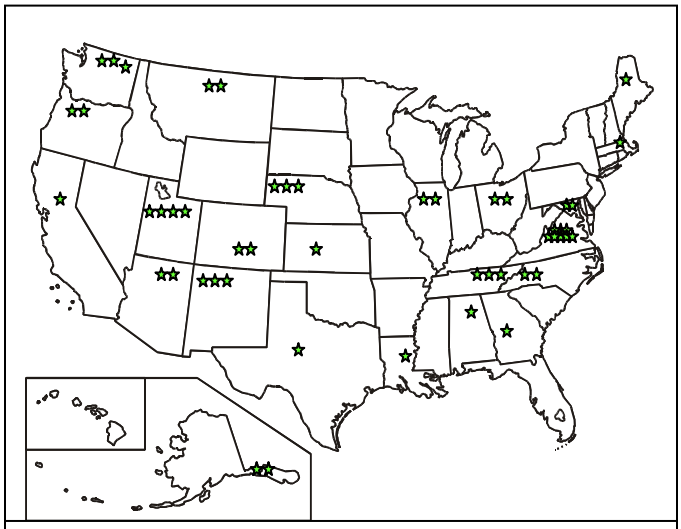

Figure 1. Federal LEED Certified Facilities in the US

According to FEMP and the National Renewable Energy Laboratory as of February 7, 2007, thirteen agencies received a LEED® certification each for fifty-one Federal facilities. This represents 6.4 million square feet of building space. The thirteen agencies include Department of Commerce, Department of Defense, Department of Energy, Department of Health and Human Services, Department of Homeland Security, Department of Interior, Department of Justice,

Department of Labor, Department of Transportation, Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, and the Social Security Administration. Forty-eight of these projects are LEED®-NC certified, two are LEED®-EB certified and one is LEED®-CI certified. Fifty of the facilities are located in the U.S. and one facility is located in Italy. Please refer to Figure 1 for a national geographical representation of the fifty Federal LEED® certified facilities. For the complete list of the Federal LEED® certified projects, including agency representative, project name, city, state, certification date, LEED® rating, LEED® version, and building square footage visit the FEMP website at: www1.eere.energy.gov/femp/pdfs/fed_leed_bldgs_sum.pdf. For more information on LEED® visit the USGBC website at: www.usgbc.org.

## IV. FEDERAL EnergyStar® BUILDINGS

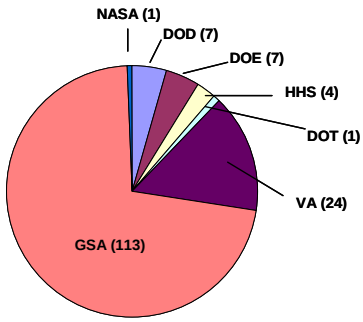


Figure 2. EnergyStar® Facilities by Agency

EnergyStar® is a joint voluntary labeling program between the Department of Energy and the Environmental Protection Agency designed to identify and promote energy-efficient products and practices to reduce greenhouse gas emissions. EnergyStar® qualified product categories include appliances, heating and cooling equipment, home-envelope products, home electronics, office equipment, lighting products, commercial food service products, and other commercial products. The EnergyStar® label is also applied to new homes, commercial, and industrial buildings. Buildings and facilities that earn the EnergyStar® label are the top performers for energy efficiency nationwide and utilize approximately 35 percent less energy than average buildings. FEMP's analysis (www1.eere.energy.gov/femp/sustainable/sustainable_casestudies.html) derived from EnergyStar® states that as of January 2007, 157 Federal facilities across forty states from seven agencies including Department of Defense, Department of Energy, Department of Health and Human Services, Department of Transportation, Department of Veterans Affairs, General Services Administration, and the National Aeronautics and Space Administration were awarded an EnergyStar® label. Please refer to Figure 2 for a breakdown of EnergyStar® facilities by agency. For the complete list of Federal EnergyStar® labeled facilities, visit the EnergyStar® website at: www.energystar.gov/index.cfm?fuseaction=labeled_buildings.showRegionSearch&building_type_id=ALL&s_code=ALL&profiles=0&also_search_id=FEDERALBLDG.

## V. OTHER SUSTAINABLE BUILDING RATING SYSTEMS

*Building Research Establishment's Environmental Assessment Method (BREEAM)* is a building rating system used to assess the environmental performance of new and existing buildings for categories in management, health and well being, energy, transportation, water use, materials and waste, land use and ecology, and pollution. The system is extensively used in the United Kingdom but is rarely used in the United States. Information on BREEAM is available at: www.breeam.org/index.jsp.

*Comprehensive Assessment System for Building Environmental Efficiency (CASBEE)* is a Japanese developed building rating tool based on the environmental performance of buildings. CASBEE is available in

English but has not been tested in the United States. CASBEE consists of four certification levels, CASBEE for pre-design, new construction, existing buildings, and renovation. For more information on CASBEE, visit: www.ibec.or.jp/CASBEE/english/index.htm.

*GBTool* is software developed by the Natural Resources of Canada for the Green Building Challenge process. The Green Building Challenge is an international endeavor between twenty countries to establish common definitions to describe "green buildings." The GBTool addresses site selection and planning, energy and resource consumption, environmental loadings, indoor environmental quality, functionality, long term performance and adaptability, and social and economic factors. To download the GBTool, visit: www.sbc.nrcan.gc.ca/software_and_tools/gbtool_e.asp.

*Green Globes™ System* is a green management tool with an assessment protocol, rating system and guide for integrating environmentally friendly design into commercial buildings. The tool facilitates recognition of the project through third-party verification and provides an interactive, flexible and affordable approach to environmental design. The tool is available at: www.thegbi.org/greenglobes/Default.asp.

## VI. FEDERAL RESOURCES – SELECTION OF GUIDES, REPORTS, STUDIES, AND TOOLS

*Whole Building Design Guide (WBDG)* is a web-based portal providing government and industry practitioners with up-to-date information on a wide range of building-related guidance, criteria and technology from a 'whole buildings' perspective. The portal is organized into three major categories: design guidance, project management and operations and maintenance. A sample of resources available on the WBDG include: *Federal Green Guide for Specifiers*, *Memorandum of Understanding for Federal Leadership in High Performance and Sustainable Buildings*, *Technical Guidance for the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding*, *GSA's LEED® Application Guide* and *LEED® Cost Study*, *Building Envelope Design Guide*, *Federal Sustainable Buildings database*, *Construction Criteria Base database*, and *Construction Waste Management Database*. To download a copy of these resources, visit the WBDG at: www.wbdg.org.

*FedCenter.gov* has seven categories of sustainable design Federal and non-Federal informational resources on: regulation, guidance, and policy; supporting information and tools; directories, catalogues, and newsletters; libraries and repositories; Federal and non-Federal organizations; lessons learned; training, presentations, and briefings; and conferences and events. Some of the Federal resources and programs listed on FedCenter.gov include: *Pentagon Field Guide for Sustainable Construction*, *Air Force Sustainable Facilities Guide*, *DOE EnergyPlus* software tool, *EPA Indoor Environments Program*, the *Federal Network for Sustainability*, *United Nations Commission on Sustainable Development*, *Sustainability at NASA, US Army Sustainability Program*, and the *USDA Sustainable Program*. Visit: www.fedcenter.gov/programs/sustainability/ for more information.

*Federal Energy Management Program's (FEMP)* website contains links to sustainable design databases, guides, reports, and studies produced by DOE and national laboratories. Resources available on the FEMP website consist of: *On-line Guide for Energy Management at Federal Data Centers, Operations and Maintenance Best Practices Guide, Procurement of Architectural and Engineering Services for Sustainable Buildings: A Guide for Federal Project Managers, Business Case for Sustainable Design in Federal Facilities, Building Cost and Performance Metrics: Data Collection Protocol, Securing Buildings and Saving Energy: Opportunities in the*

*Federal Sector, and the High Performance Buildings Database*. To view these resources, visit the FEMP website, at: www1.eere.energy.gov/femp/sustainable/sustainable_resources.html#links.

*Federal Facility Council (FFC)* and its parent body, the Board on Infrastructure and the Constructed Environment, produce over 100 reports on a broad range of facilities-related topics. FFC publications are available on-line at: www7.nationalacademies.org/ffc/FFC_Publications.html.

## VII. NON-FEDERAL RESOURCES – SELECTION OF GUIDES, REPORTS, STUDIES, AND TOOLS

*US Green Building Council (USGBC)* provides users access to obtain Leadership in Energy and Environmental Design® (LEED®) guides and resources including LEED® for New Construction Version 2.1 Reference Guide, LEED® for New Construction Rating System version 2.1, LEED® for Existing Buildings Reference Guide, LEED® for Commercial Interiors Reference Guide, and LEED® for Core and Shell Development Reference Guide. USGBC also maintains a list of certified and registered LEED® projects. For more information, visit the USGBC website at: www.usgbc.org.

*American Society of Heating Refrigerating and Air-Conditioning Engineers (ASHRAE)* yields a monthly magazine that reviews current heating, ventilation, air-conditioning and refrigeration (HVAC&R) technology, a quarterly journal that reports significant research from ASHRAE and the international HVAC&R research communities, a quarterly magazine that provides applicable information on indoor air quality, handbooks on HVAC&R, publications, educational products, and standards and guidelines. More information is available at: www.ashrae.org.

*Building Design and Construction* produces a monthly magazine, *Building Design + Construction Magazine* for architects, contractors, engineers, and owners/developers, a weekly newsletter eeNews and a list of building and construction publications. For more information, visit: www.bdcnetwork.com/.

*New Building Institute* develops a variety of guidelines for heating applications, lighting products, mechanical systems, and whole buildings. To view the guidelines, visit: www.newbuildings.org/guidelines.htm.

*Rocky Mountain Institute (RMI)* offers a library of resources and RMI publications with categories on energy, energy security, security, buildings and land, business, communities, climate, transportation, and other resources. View the publications, at: www.rmi.org/.

*GreenBiz.com* has an online search criteria developed with Amazon.com to identify useful books on green-business topics. GreenBiz.com also provides guides, reports, tools, and basic information on green buildings. For more information, visit www.greenbiz.com.

*American Institute of Architects* features publications on architectural graphic standards, integrated practice of architecture, guidelines for design and cost for health care facilities, sustainable residential interiors, and various others at: https://aia-timssnet.uapps.net/timssnet/products/tnt_showprdsplash.cfm.

*American Society of Civil Engineers* showcases a monthly newsletter, an online bookstore, a civil engineering magazine and a collection of journals. The publications are available at: www.asce.org/products.cfm.